

## Vitaescence Resin Composite (Project 02-08) (01/03)

Vitaescence resin composite is an esthetic, micro-hybrid, light-cured restorative material intended for use in the anterior and posterior dentition. The Bis-GMA based product is filled to 75 weight percent (58 volume percent) with filler particles having an average size of 0.7 microns.

Among the many advantages claimed by Ultradent Products for Vitaescence are that it is radiopaque, extremely esthetic, and exhibits a low wear rate. The company stresses the esthetics of the product and claims that it results from the material's unique fluorescence and opalescence. Vitaescence is available in a total of 33 shades (18 dentin and 15 enamel), however the kit evaluated by DIS contained 12 shades (5 dentin and 7 enamel), each packaged in a 2.6-g screw-type syringe. The specially-designed Quadraspense® syringes are intended to facilitate dispensing small amounts of the composite. Ultradent is in the process of making Vitaescence available in capsules as well.



The shades are identified by Vita shade guide number for the dentin shades; the enamel shades have been given names rather than Vita letters/numbers. Instructions call for placing the material in 1½- to 2-mm increments and using a 20-second light-curing time. Included with the product is a shade guide made of Vitaescence. Each tab is wedge shaped, and two different shade guide tabs can be overlayed to simulate the clinical result if the composite is used in layers to restore a tooth. While the Advanced Kit DIS evaluated did not contain a dentin bonding agent, the more complete Masters Kit does.



### Manufacturer:

Ultradent Products, Inc.  
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South Jordan, UT 84095  
(800) 552-5512  
(800) 842-9024 FAX  
[www.ultradent.com](http://www.ultradent.com)

### Suggested Retail Price:

\$369.95 Vitaescence Advanced Kit (REF/UP 515) contains:  
-five 2.5-g syringes, one each of shades A1, A2, A3, A4, B1  
-seven 2.5-g syringes, one each of shades Opaque Snow, Pearl Frost, Pearl Natural, Pearl Smoke, Trans Mist, Trans Blue, Trans Smoke

\$95.95 Vitaescence Advanced Shade Guide (REF/UP 1171)

### Government Price:

\$314.46 Vitaescence Advanced Kit (item number and contents as listed above)  
\$81.56 Vitaescence Advanced Shade Guide (item number as above)

### ADVANTAGES:

- + Good strength; tensile strength is similar to that of Z250 (3M ESPE).
- + Laboratory testing found that after polishing, Vitaescence was as smooth as several tested microfills.
- + Users rated the product highly for polishability and overall esthetics.
- + Is adequately radiopaque for radiographic detection.
- + Relatively hard; should resist scratches and maintain a well-polished surface.
- + A 2-mm thick increment of the composite can be adequately cured using only a 20-second light exposure.

- + Quadraspense® syringe design allows for removal of small amounts of composite for placement.
- + Shade guide allows users to predetermine the results of overlaying different shades of the material.
- + The kit's 12 shades were judged as adequate by the clinical users.
- + Instructions contain nicely done graphics showing product use.
- + Comes with Material Safety Data Sheet (MSDS).

**DISADVANTAGES:**

- Users felt the resin slumped excessively after placement.
- Sticks to instruments.
- More expensive than several other popular microhybrid resin composites.
- Not currently available in unit-dose capsule form.
- Is difficult to maintain proper infection control using syringe dispensing system.
- Evaluated version of the product is not packaged with a dentin bonding agent.
- Shade guide must be purchased separately.
- Shade guide is very expensive.
- Instructions are minimal when describing how to use the shade tabs to simulate resin layering.
- Expiration date is not printed on the product box or syringes.

**SUMMARY AND CONCLUSIONS:**

Overall, Vitalescence did well in laboratory testing, with many of its properties at least comparable to those of other popular hybrid resin composites. Vitalescence's polishability, esthetics, and shade matching were rated highly by users. Some time is saved when using Vitalescence because a standard 2-mm thickness requires only a 20-second light exposure for proper curing. Users noted some problems with its handling characteristics, however. They reported that the resin often stuck to their placement instruments and slumped after being placed. To the evaluators, the fact that Vitalescence is currently not available in unit-dose capsules was a significant shortcoming. It is also more expensive than several other currently-marketed microhybrids, and its rather expensive shade guide must be purchased separately.

**Vitalescence Resin Composite** is rated **Marginal** for use by the federal dental services.